End Station Bleed-up and Recovery Procedure Check list

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Bleed-up Procedure

- ☐ 0) If valve 8 is installed: Close valve 8. Open extension port pumping valve if desired
- ☐ 1) Verify that the end station turbo gate valve is open
- ☐ 2) Close valve 6
- ☐ 3) Close valve 7
- ☐ 4) Close the turbo foreline valve
- ☐ 5) Turn off turbo by pushing turbo controller start/stop button (at lower right corner)
- ☐ 6) Wait 10 minutes for turbo to spin down
- ☐ 7) Loosen hinged window on end station
- ☐ 8) Open the dewar vent valve and adjust to lower flow rate
- ☐ 9) Connect dewar vent hose to the turbo vent valve
- ☐ 10) Slowly bleed-up end station (30 seconds per decade) by controlling turbo vent valve. Simultaneously, monitor the MKS pressure gauges: End Station for progress and DPS Section for leaks (stop if any leak is found!)
- ☐ 11) Once 100 Torr is reached in the end station, fully open the turbo vent valve
- ☐ 12) Wait for the end station to fully vent and hinged window to open
- ☐ 13) Close the turbo vent valve
- ☐ 14) Close the dewar vent valve and stow dewar vent hose

Recovery Procedure

- ☐ 0) Verify that valve 8 is closed (if equipped)
- ☐ 1) Verify that the end station turbo gate valve is open
- ☐ 2) Verify that valve 6 and 7 controls are in closed state
- ☐ 3) Verify that the turbo vent valve is closed
- ☐ 4) Close and tighten hinged window
- ☐ 5) Open turbo foreline valve slowly until it is fully open, while monitoring end station pressure drop to below 1 Torr
- ☐ 6) Start turbo pump using turbo controller start/stop button
- ☐ 7) Wait until end station pressure is 1.8×10^{-6} Torr or lower (typically 20 minutes)
- ☐ 8) Reset valve 7 control interlocks (ES pressure and turbo speed limits are typically faulted after the bleed-up)
- ☐ 9) Open valve 7
- ☐ 10) Verify that the upstream (DPS) pressure is below 2×10^{-6} Torr
- ☐ 11) Open valve 6